AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1.   (Cancelled)

2.   (Cancelled)

3.   (Cancelled)

4.   (Cancelled)

5.   (Cancelled)

6.   (Currently Amended) ~~A method as claimed in claim 3, wherein the step of detecting the network failure comprises steps of:~~ A method of protecting an Open Shortest Path First (OSPF) network against network failures affecting traffic flow between an interior router (IR) and a predetermined primary area border router (ABR) using a back-up link between the IR and a predetermined alternate ABR, the method comprising steps of:

maintaining the back-up link in a dormant state during normal operations of the network, such that no traffic is forwarded to the back-up link during normal operations of the network; and

activating the back-up link in response to a network failure affecting communications between the IR and the primary ABR, such that traffic can be routed between the IR and the alternate ABR through the back-up link comprising:

detecting the network failure affecting communications between the IR and the primary ABS comprising:

detecting a loss of communications between the IR and the primary ABR;

monitoring a link between the IR and the primary ABR for a predetermined period, to detect recovery of communications; and ~~and~~

declaring a link failure if recovery of communications between the IR and the primary ABR is not detected within the predetermined period;

~~promoting the back-up link to an active status; and~~

~~advertising the back-up as a valid route.~~

7. (Currently Amended) A method as claimed in claim ~~36~~, wherein the step of promoting the back-up link comprises a step of negotiating an adjacency relationship between the IR and the alternate ABR.

8. (Currently Amended) A method as claimed in claim ~~16~~, further comprising a step of deactivating the back-up link in response to a network recovery affecting communications between the IR and the primary ABR, such that traffic flow through the back-up link between the IR and the alternate ABR is terminated.

9. (Original) A method as claimed in claim 8, wherein the step of deactivating the back-up link comprises steps of:

detecting the network recovery; and

demoting the back-up link to an inactive status.

10. (Original) A method as claimed in claim 9, wherein the network recovery is detected by the IR.

11. (Original) A method as claimed in claim 10, wherein the step of deactivating the back-up link to an inactive status is initiated by the IR.

12. (Original) A method as claimed in claim 9, wherein the step of detecting the network recovery comprises steps of:

detecting a recovery of communications between the IR and the primary ABR;

monitoring a link between the IR and the primary ABR for a predetermined period, to detect loss of communications; and

declaring a link recovery if loss of communications between the IR and the primary ABR is not detected within the predetermined period.

13.   (Original) A method as claimed in claim 9, wherein the step of demoting the back-up link comprises a step of terminating an adjacency relationship between the IR and the alternate ABR.

14.   (Cancelled)

15.   (Cancelled)

16.   Cancelled)

17.   (Cancelled)

18.   (Currently Amended) ~~A router as claimed in claim 17, wherein the means for detecting the network failure comprises:~~ A router adapted for protecting an Open Shortest Path First (OSPF) network against network failures affecting communications with a predetermined adjacent router using a back-up link to a predetermined alternate router, the router comprising:

means for maintaining the back-up link in a dormant state during normal operations of the network, such that no traffic is forwarded to the back-up link during normal operations of the network; and

means for activating the back-up link in response to a network failure affecting communications with the primary router, such that traffic can be routed through the back-up link comprising:

means for detecting the network failure affecting communications with the primary adjacent router comprising:

means for detecting a loss of communications with the primary adjacent router;

means for monitoring a link to the primary adjacent router for a predetermined period, to detect recovery of communications; ~~and~~

means for declaring a link failure if recovery of communications with the primary adjacent router is not detected within the predetermined period.

means for promoting the back-up link to an active status; and

means for advertising the back-up link as a valid route.

19. (Currently Amended) A router as claimed in claim ~~17~~18, wherein the means for promoting the back-up link comprises means for negotiating an adjacency relationship with the alternate router.

20. (Currently Amended) A router as claimed in claim ~~14~~18, further comprising means for deactivating the back-up link in response to a network recovery affecting communications with the primary adjacent router, such that traffic flow with the alternate router through the back-up link is terminated.

21. (Original) A router as claimed in claim 20, wherein the means for deactivating the back-up link comprises:

means for detecting the network recovery; and

means for demoting the back-up link to an inactive status.

22. (Original) A router as claimed in claim 21, wherein the means for detecting the network recovery comprises:

means for detecting a recovery of communications with the primary adjacent router;

means for monitoring a link to the primary adjacent router for a predetermined period, to detect loss of communications; and

means for declaring a link recovery if loss of communications with the primary adjacent router is not detected within the predetermined period.

23. (Original) A router as claimed in claim 21, wherein the means for demoting the back-up link comprises means for terminating an adjacency relationship with the alternate adjacent router.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27.   (Cancelled)

28.   (Currently Amended) ~~The computer-readable medium as claimed in claim 27, wherein the software adapted to control the router to detect the network failure comprises:~~ A computer-readable medium encoded with a software program adapted to control a router of an Open Shortest Path First (OSPF) network to protect against network failures affecting communications with a predetermined primary adjacent router using a back-up link to a predetermined alternate router, the computer-readable medium comprising:

software adapted to control the router to maintain the back-up link in a dormant state during normal operations of the network, such that no traffic is forwarded to the back-up link during normal operations of the network; and

software adapted to control the router to activate the back-up link in response to a network failure affecting communications with the primary router, such that traffic can be routed through the back-up link comprising:

software adapted to control the router to detect the network failure affecting communications with the primary adjacent router comprising:

software adapted to control the router to detect a loss of communications with the primary adjacent router;

software adapted to control the router to monitor a link to the primary adjacent router for a predetermined period, to detect recovery of communications; ~~and~~

software adapted to control the router to declare a link failure if recovery of communications with the primary adjacent router is not detected within the predetermined period;

software adapted to control the router to promote the back-up link to an active status; and

software adapted to control the router to advertise the back-up link as a valid route.

29.   (Currently Amended)   The computer-readable medium as claimed in claim ~~27~~28,
        wherein the software adapted to control the router to promote the back-up link
        comprises:

        software adapted to control the router to negotiate an adjacency relationship with the
                alternate router; and

        software adapted to control the router to update a respective forwarding table of the
                router to identify the back-up link as a valid route.

30.   (Currently Amended) The computer-readable medium as claimed in claim ~~24~~28, further
        comprising software adapted to control the router to deactivate the back-up link in
        response to a network recovery affecting communications with the primary adjacent
        router, such that traffic flow with the alternate router through the back-up link is
        terminated.

31.   (Previously Presented) The computer-readable medium as claimed in claim 30, wherein
        the software adapted to control the router to deactivate the back-up link comprises:

        software adapted to control the router to detect the network recovery; and

        software adapted to control the router to demote the back-up link to an inactive status.

32.   (Previously Presented) The computer-readable medium as claimed in claim 31, wherein
        the software adapted to control the router to detect the network recovery comprises:

        software adapted to control the router to detect a recovery of communications with the
                primary adjacent router;

        software adapted to control the router to monitor a link to the primary adjacent router
                for a predetermined period, to detect loss of communications; and

        software adapted to control the router to declare a link recovery if loss of
                communications with the primary adjacent router is not detected within the
                predetermined period.

33.   (Previously Presented) The computer-readable medium as claimed in claim 31, wherein
        the software adapted to control the router to demote the back-up link comprises:

software adapted to control the router to terminate an adjacency relationship with the alternate adjacent router; and

software adapted to control the router to update a respective forwarding table of the router to reflect an inactive status the back-up link.